009000 - OFFICE OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION (OSPI) PROJECT REQUIREMENTS

PART 1 - GENERAL

1.01 OSPI

A. The owner has applied for matching funds pursuant to OSPI regulations and expects to receive state matching funds.
   a. Categories of **NON** matching funds include:
      i. Building demolition and Hazardous materials demolition
   b. Categories of matching funds include:
      i. Selected Site Work and Selective Demolition

B. Each bidder shall be responsible for seeing that any bid includes any costs that may be required by the contractor to comply with OSPI rules and associated regulations specified in this section.

1.02 RELATED SECTIONS

A. 004100 Bid Form
B. 004310 Supplement A – Washington Declaration of Subcontractors
C. 004320 Supplement B – List of Unite Prices
D. 004340 Supplement C – OPSI List of Separate Prices
E. 012900 – Payment Procedures

1.03 REFERENCES

A. OSPI School Construction Assistance Program
B. WAC 392-343-100 Special inspections and testing
C. WAC 392-343-120 Costs to be financed entirely with school district funds
D. WAC 392-343-125 Unforeseen Costs
E. OSPI School Facilities Manual

1.04 004340 - Supplement C – OSPI List of separate Prices – reporting requirements

A. The Owner is eligible for State matching funds for the construction of the Wapato High School Additions and Modernizations. To qualify for matching funds OSPI will require the following costs to be reported separately on 004340 Supplement C - OSPI List of separate Prices

   1. Separate Price #1-Non–Matchable Building Demolition and Hazardous Building Materials Abatement.
      a. Provide a lump sum price for all work shown on the drawings and specifications for the following work:
         i. Complete demolition and removal of all building footings, foundations, floor slabs, walls, roofs, windows, doors, mechanical, plumbing and electrical that is within the perimeter of the building foot print in the area shown as separate price 1 on the attached plan at the end of this specification section.
         ii. Complete demolition and removal of overhead canopies, including footings, foundations, columns, roofs and associated mechanical, plumbing and electrical components in the area shown as separate price 1 on the attached plan at the end of this specification section.
         iii. All Hazardous building material abatement and removal as specified in specifications sections:

SECTION 000100 - TABLE OF CONTENTS

DOCUMENTS – INTRODUCTORY INFORMATION, BIDDING REQUIREMENTS, AND CONTRACT REQUIREMENTS

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 024116 - STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Demolition and removal of buildings and site improvements.
   2. Removing below-grade construction.
   3. Disconnecting, capping or sealing, and removing site utilities.

B. Related Sections:
   1. Section 011000 "Summary" for use of the premises and phasing requirements.
   2. Section 013200 "Construction Progress Documentation" for preconstruction photographs taken before building demolition.
   3. Section 024119 "Selective Demolition" for partial demolition of buildings, structures, and site improvements.
   4. Section 311000 "Site Clearing" for site clearing and removal of above- and below-grade site improvements not part of building demolition.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner. Include fasteners or brackets needed for reattachment elsewhere.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor after notice to proceed.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
   1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

C. Owner Salvage: The owner may at their discretion, salvage and remove any thing in the facility up to the time of notice to proceed.

1.5 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit informational report, including Drawings, that indicates the measures proposed for protecting individuals and property. Indicate proposed locations and construction of barriers.
   1. Adjacent Buildings: Detail special measures proposed to protect adjacent buildings to remain including means of egress from those buildings.

B. Schedule of Building Demolition Activities: Indicate the following:

1. Detailed sequence of demolition work, with starting and ending dates for each activity.
2. Temporary interruption of utility services.
3. Shutoff and capping or re-routing of utility services.

C. Predemolition Photographs or Video: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by demolition operations.

D. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.6 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

C. Predemolition Conference: Conduct conference at Project site.
1. Inspect and discuss condition of construction to be demolished.
2. Review structural load limitations of existing structures.
3. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review and finalize protection requirements.
5. Review procedures for noise control and dust control.
6. Review procedures for protection of adjacent buildings.

1.7 PROJECT CONDITIONS

A. Buildings to be demolished will be vacated and their use discontinued before start of the Work.

B. Buildings immediately adjacent to demolition area will be occupied. Conduct building demolition so operations of occupied buildings will not be disrupted.
1. Provide not less than 72 hours' notice of activities that will affect operations of adjacent occupied buildings.
2. Maintain access to existing walkways, exits, and other facilities used by occupants of adjacent buildings.
   a. Do not close or obstruct walkways, exits, or other facilities used by occupants of adjacent buildings without written permission from authorities having jurisdiction.

C. Owner assumes no responsibility for buildings and structures to be demolished.
1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

D. Hazardous Materials: Hazardous materials are present in buildings and structures to be demolished.
1. Hazardous material remediation is specified elsewhere in the Contract Documents.
2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

E. On-site storage or sale of removed items or materials is not permitted.

F. Concrete crushing(Contractors Option). Contractor may crush and reuse crushed concrete for base as identified and processed within the requirements of the geotechnical report that is part of this bid package.

1. Detailed sequence of demolition work, with starting and ending dates for each activity.
2. Temporary interruption of utility services.
3. Shutoff and capping or re-routing of utility services.

C. Predemolition Photographs or Video: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by demolition operations.

D. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.6 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

C. Predemolition Conference: Conduct conference at Project site.
1. Inspect and discuss condition of construction to be demolished.
2. Review structural load limitations of existing structures.
3. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review and finalize protection requirements.
5. Review procedures for noise control and dust control.
6. Review procedures for protection of adjacent buildings.

1.7 PROJECT CONDITIONS

A. Buildings to be demolished will be vacated and their use discontinued before start of the Work.

B. Buildings immediately adjacent to demolition area will be occupied. Conduct building demolition so operations of occupied buildings will not be disrupted.
1. Provide not less than 72 hours' notice of activities that will affect operations of adjacent occupied buildings.
2. Maintain access to existing walkways, exits, and other facilities used by occupants of adjacent buildings.
   a. Do not close or obstruct walkways, exits, or other facilities used by occupants of adjacent buildings without written permission from authorities having jurisdiction.

C. Owner assumes no responsibility for buildings and structures to be demolished.
1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

D. Hazardous Materials: Hazardous materials are present in buildings and structures to be demolished.
1. Hazardous material remediation is specified elsewhere in the Contract Documents.
2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

E. On-site storage or sale of removed items or materials is not permitted.

F. Concrete crushing(Contractors Option). Contractor may crush and reuse crushed concrete for base as identified and processed within the requirements of the geotechnical report that is part of this bid package.

3.5 DEMOLITION BY MECHANICAL MEANS

A. Proceed with demolition of structural framing members systematically, from higher to lower level. Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.

B. Remove debris from elevated portions of the building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
   1. Remove structural framing members and lower to ground by method suitable to minimize ground impact and dust generation.

C. Below-Grade Construction: Demolish foundation walls and other below-grade construction.
   1. Remove below-grade construction, including basements, foundation walls, and footings, completely.

D. Existing Utilities: Abandon existing utilities and below-grade utility structures. Cut utilities flush with grade.

E. Existing Utilities: Demolish and remove existing utilities and below-grade utility structures completely.

3.6 SITE RESTORATION

A. Below-Grade Areas: Completely fill below-grade areas and voids resulting from building demolition operations with structural fill materials according to backfill requirements in Section 312000 "Earth Moving" and as recommended by the Soils Report, whichever is more stringent.

B. Site Grading: Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent existing grades and new grades.

3.7 REPAIRS

A. Promptly repair damage to adjacent buildings caused by demolition operations.

3.8 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove demolition waste materials from Project site and legally dispose of them in an EPA-approved landfill acceptable to authorities having jurisdiction.
   1. Do not allow demolished materials to accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Do not burn demolished materials.

3.9 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.
   1. Clean roadways of debris caused by debris transport.

END OF SECTION 024116

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Demolition and removal of selected portions of building or structure.
   2. Demolition and removal of selected site elements.

B. Related Requirements:
   1. Section 011000 "Summary" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.
   2. Section 015639 "Temporary Tree and Plant Protection" for temporary protection of existing trees and plants that are affected by selective demolition.
   3. Section 017300 "Execution" for cutting and patching procedures.
   4. Section 311000 "Site Clearing" for site clearing and removal of above- and below-grade improvements.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.

C. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
   1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.
   1. Inspect and discuss condition of construction to be selectively demolished.
   2. Review structural load limitations of existing structure.
   3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
   4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
   5. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property , for environmental protection , for dust control and , for noise control. Indicate proposed locations and construction of barriers.

B. Schedule of Selective Demolition Activities: Indicate the following:
   1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
   2. Interruption of utility services. Indicate how long utility services will be interrupted.
   3. Coordination for shutoff, capping, and continuation of utility services.
   4. Use of elevator and stairs.
   5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

C. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.

D. Predemolition Photographs or Video: Submit before Work begins.

E. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

F. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

1.7 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.8 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.9 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: Hazardous materials are present in buildings and structures to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
   1. Hazardous material remediation is specified elsewhere in the Contract Documents.

2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.

C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or preconstruction videotapes.
1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
1. Comply with requirements for existing services/systems interruptions specified in Section 011000 "Summary."

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
1. Owner's Construction Manager will arrange to shut off indicated services/systems when requested by Contractor.

2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.
    a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    b. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    c. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.

C. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
1. Comply with requirements for access and protection specified in Section 015000 "Temporary Facilities and Controls."

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furniture, furnishings, and equipment that have not been removed.
5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
5. Maintain adequate ventilation when using cutting torches.
6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.

B. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, then remove concrete between saw cuts.

C. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

D. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.

E. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings." Do not use methods requiring solvent-based adhesive strippers.

F. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing and so that building interior remains watertight and weathertight.
1. Remove existing roof membrane, flashings, copings, and roof accessories.
2. Remove existing roofing system down to substrate.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

SECTION 028080 - ASBESTOS ABATEMENT

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 GENERAL CONDITIONS

A. All costs associated with asbestos containing materials (ACM) as specified herein shall be included in the lump sum bid. Furnish all supervision, labor, materials, equipment, permits, personnel monitoring, environmental monitoring, etc. required to remove, handle, and dispose of ACM and associated components described in this section.

B. ACM will be abated as a portion of the demolition of the Big Package 1 work areas. Bid Package 1 work areas generally include the 200 Wing, 300 Wing, Cafeteria, underlying tunnels systems, outbuildings, and exterior features of the Bid Package 1 work areas at the Wapato High School campus. Adjacent buildings, playfields, and sport fields will remain occupied during asbestos abatement.

C. Documents for Reference: Refer to the *Hazardous Building Materials Inspection Report, Wapato High School, 1103 South Wasco Avenue, Wapato, Washington* dated October 18, 2011, including all supplemental sampling events, for additional information regarding materials identified as ACM. Copies of these reports are at the following locations:

Wapato School District, 212 South Third Street, Wapato, Washington
Fulcrum Environmental Consulting, Inc., 406 North Second Street, Yakima, Washington

D. Schedule: Please refer to Drawings D. 101, D. 102, and D. 103 for hazardous materials abatement schedule.

E. Contents and Required Content Relocation: The Asbestos Contractor will relocate building contents, including cabinets, etc., as necessary to access and abate ACM. Asbestos Contractor shall anticipate that a significant volume of discarded furniture remains in the areas of work. Contractor shall remove and discard any remaining furniture as solid waste.

F. Responsibility to Demolish Materials to Access ACM: Asbestos Contractor shall demolish all overlying materials necessary to access and abate ACM specified herein.

G. Materials with Less than 1% Asbestos: Materials with less than 1% asbestos were identified in select building materials. Identified materials include white and gray window glazing on the exterior of the building, and beige joint compound. Abatement of materials with less than 1% asbestos is not required as a portion of this specification; however, Contractor shall be responsible for work protection under Washington Industrial Safety and Health Act (WISHA) Regional Directives and Washington State Department of Labor and Industries, Division of Occupation Safety and Health's (DOSH) Safe Work Place regulations, WAC 296-800-110.

H. Clearance Standard: Bid Package 1 work areas will not be occupied by District students and staff following the completion of abatement activities. However, all areas will still be subject to Asbestos Hazard Emergency Response Act (AHERA) clearance standards, and cleared by either Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) as specified herein.

Exterior asbestos abatement will be cleared by visual inspections conducted by the Owner's Representative.

1.3 SUMMARY

A. Description of Work: Work covered by this section includes the handling of friable and non-friable ACM and incidental procedures and equipment required to protect workers and adjacent building and campus occupants from airborne asbestos fibers during the work described. Portions of the work included cleaning and decontamination of all areas from which ACM have been removed, application of a sealing agent, and appropriate disposal of all ACM, ACM debris, and other non-ACM components scheduled for removal. For all ACM removed, or ACM contaminated waste, Asbestos Contractor shall arrange and provide for burial at an appropriately permitted landfill.

B. Areas of Work: The 200 Wing, 300 Wing, and Cafeteria are all part of the Main Building on the Wapato High School campus. The 200 Wing houses former science classrooms and represents the northwest corner of the Main Building. The 300 Wing includes the administration offices and classrooms, and is located east of the 200 Wing. The Cafeteria is located south of the 300 Wing, east of the Gymnasium, and west of the Kitchen and Boiler Room. Tunnels are located below grade and are interconnected for the entirety of the main campus buildings. Adjacent District buildings will be occupied during asbestos abatement and subsequent demolition. Contractor shall secure asbestos work areas such that unauthorized personnel do not have access. Actual areas of components specified for abatement shall be field verified in coordination with the Owner's Representative and Architect.

C. Dimensions, Quantities, and Locations: Dimensions, quantities and locations are approximate, included solely to provide general information to the Asbestos Contractor. Asbestos Contractor shall be responsible for abatement of all ACM specified below without regard to accuracy of quantity or location recorded. The Asbestos Contractor shall be responsible for ACM in hidden locations, such as but not limited to, ACM flooring located under partition walls or beneath cabinets/fixtures and piping systems located behind finish materials. For the purposes of additive or deductive change-order requests, actual quantities must vary by more than fifteen (15) percent of the total quantity estimates provided before a change-order request will be considered. Asbestos Contractors shall visit the site and familiarize themselves with the work and conditions under which the work is to be performed.

D. Work Practices: Work practices specified in base bid work shall be allowed if airborne fiber concentrations remain below levels specified in "Table 2: Asbestos Contractor Monitoring Schedule and Airborne Fiber Concentration" table, on page 9 of this Section. Should analytical results exceed specified airborne fiber concentrations, the steps outlined in the "Work Practices as a Function of Airborne Fiber Concentration" shall be followed.

E. Negative Pressure Enclosure: A negative pressure enclosure system means a NPE as defined by WAC 296-62-07712(7)(a) and the Glossary at the end of this section. The NPE shall be capable of maintaining a minimum of 4 air exchanges per hour with –0.02 column inches of water pressure differential, relative to outside pressure as evidenced by manometric measurements. The NPE shall be inspected for breaches and smoke-tested for leaks prior to commencement of asbestos removal and at the beginning of each subsequent shift.

F. Material Summary: The following table lists materials to be abated and is summarized by material description. Additional information pertaining to the location, accessibility, or specific abatement performance criteria by asbestos material type follows the Table. The following abbreviations are used for brevity sake in the table: Thermal System Insulation (TSI); each (EA); linear feet (LF); and square feet (SF).

Table 1: Asbestos Containing Material Quantities

Material Description	Unit	Quantity			
		200 Wing	300 Wing	Cafeteria	Tunnels
TSI – Joints, Elbows, Tees, Etc. (JET)	EA	20	20	6	250
TSI – Pipe Runs	LF	250	250	100	6,500
TSI – Vibration Dampeners	EA	25	25	-	-
Sprayed-on Acoustical Material	SF	-	-	9,700	-
Vinyl Floor Tile and ACM adhesive	SF	17,000	31,000	12,000	-
Counter top (Black Ebonite-type)	SF	300	-	-	-
Cement Asbestos Board	SF	70	-	-	-
Chalkboards *(Assumed)* and associated ADV (*Assumed*)	EA	25	25	6	-
Built-up Roofing	SF	21,000	36,000	12,500	-

1. Thermal System Insulation: Thermal system insulation are classified as Thermal System Insulation under AHERA And shall be abatement by the Asbestos Contractor.

   Asbestos containing "mag-like" and "air cell-like" thermal system insulation (TSI) is located on piping systems and joints, elbows, and tees. Additionally, ACM fabric vibration dampeners are present associated with heating, ventilation, and air conditioning units.

   Hard, mudded-type asbestos containing insulation is also located on piping system joints, elbows, tees, hangers, etc. (JETs), associated with all types of piping system insulation. Some piping insulation was determined through laboratory analysis to be non-ACM. However, ACM mag-type seams were identified on the majority of the piping runs. Due to the presence of ACM mag-type seams and ACM hard mudded joints, Asbestos Contractor shall remove all piping as asbestos containing TSI materials prior to building demolition. Asbestos Contractor's bid shall include any necessary demolition costs required to access and abate thermal system insulation.

   Thermal system insulation associated with pipe runs are located both in the tunnels, and above grade. Contractor shall remove all TSI located between above grade and tunnel piping systems. In locations where above grade TSI is to remain in structures not scheduled for abatement during Bid Package 1, such as the Gymnasium and Boiler Room, Contractor shall remove all TSI on connecting sub-grade runs until it is flush with the above grade system and lag-cloth, encapsulate any exposed TSI, and seal as necessary to ensure that airflow does not move between areas where all ACM has been abated and areas where ACM has not been abated.

   Some of the ACM piping system insulation and JET insulation is located at substantial elevations (greater than 10 feet) above grade, in tight workspaces, and in tunnels. Asbestos Contractor shall anticipate and include in the bid any additional access and worker protection measures required to facilitate abatement of all ACM.

   Vibration dampeners are associated with HVAC units in the attics of the 200 and 300 Wings. Vibration dampeners consist of ACM fabric materials and range in size from 1-foot square to 4-feet square in size. Contractor shall completely remove all vibration dampener material and shall wet clean the interior and exterior of associated ducting to the extent that can be reached without entering ducting.

In many locations, including the tunnels, TSI debris associated with original construction and repairs have resulted in loose ACM debris. Contractor shall clean all areas of TSI debris located during the project. Areas of debris removal where cleanable surfaces or materials remain shall be wet cleaned in accordance with 40 CFR 763.91(c)(1) wet pre-cleaning requirements for work areas containing friable ACM or thermal system insulation. In the tunnels, Contractor shall remove all suspect asbestos containing debris and any associated materials, such as soil or rock, which may be contaminated with asbestos debris.

Please note that the District intends to reuse all piping located within the north and south Gymnasium tunnels. Contractor shall bring to the attention of the Owner's Representative and Architect any areas of damaged piping in these areas identified during asbestos abatement.

2. Surfacing Materials Including Overspray: Surfacing and associated overspray are classified as Surfacing under AHERA and shall be abated by the Asbestos Contractor.

Asbestos containing acoustical surfacing and surfacing overspray is located on the ceiling and portions of the walls of the Cafeteria, Music Room, and Band Room. The roof structure consists of multiple concrete barrels and areas of flat roof. The surfacing consists of an approximately 5/8-inch to 3/4-inch thick layer but may be significantly thicker at select locations. The surface layers were shown through laboratory analysis to be ACM and overly a concrete substrate. Concrete substrate is generally a smooth and relatively flat surface; however, surface imperfections, dimples, holes, cracks, seams, etc. are assumed to be present across the concrete substrate.

Surfacing overspray is located above and behind finished materials, wood and metal framing, etc. in the adjacent Foyer, Music Room, Bank Room, and Areas in from of the Kitchen. Overspray is also located in vent ducting and on interstitial components, such as electrical conduits; plumbing components; heating, ventilation, and air conditioning ducting; light fixtures; imbedded electrical boxes; suspended ceiling tile and associated metal grid; etc.

Height to the ceiling surface is greater than 20-feet from the underlying floor elevation.

Asbestos Contractor shall abate the surfacing and overspray from the entirety of the Cafeteria and associated areas. Quantities reflected in the table represent total square foot of the areas specified for abatement and do not include quantification of any overspray that may be present. In select areas, additional non-ACM materials shall also be demolished by the Asbestos contractor.

Asbestos Contractor shall remove and clean all light fixtures, speaker systems, clocks and other appurtenances attached to the ceiling as a portion of the project. All cleaned light fixtures shall be disposed as lighting and electrical wastes as provided for in other portions of this specification. Appurtenances shall be either cleaned and removed from the work area as solid waste or disposed of as ACM waste.

Minimum acceptable abatement method for surfacing shall be a NPE with attached 3-stage decontamination enclosure system and attached 2-stage waste load-out enclosure system. Contractor shall complete all surfacing abatement under supplied air respiratory protection unless 1) DOSH has issued notice of positive air purifying respirator (PAPR) acceptability before beginning of the project, or 2) Asbestos contractor requested and receives a specific variance from DOSH for the use of PAPR during the project. Variance must be provided to the Owner's Representative not less than 14 days prior to proposed use of PAPR.

3. Miscellaneous Materials: The following are classified as Miscellaneous Materials under AHERA and shall be abated by the Asbestos Contractor

a. Vinyl Floor Tile and Associated Adhesive: Asbestos containing 9-inch floor tile, non-ACM 9-inch floor tile, and 12-inch non-ACM floor tile are located throughout the work area. All floor tile is associated with ACM adhesive. In some areas, non-ACM 12-inch tile is overlying ACM 9-inch tile overlying ACM adhesive.

The asbestos adhesive predominately overlies concrete underlayment.

Asbestos Contractor shall remove all floor tile and ACM adhesive as asbestos containing waste. Asbestos Contractor shall remove all ACM adhesive that is reasonably separable from the concrete underlayment. Asbestos Contractor shall then thoroughly encapsulate any remaining adhesive stained concrete underlayment.

Use of solvents for adhesive removal is subject to approval by the Owner's Representative prior to use. Asbestos Contractor's elective use of hazardous materials (such as solvents) is discouraged. Material Safety Data Sheets (MSDS) for proposed hazardous or potentially hazardous materials shall be included in the Asbestos Contractor's pre-work submittal package. Asbestos Contractor assumes full responsibility for waste characterization and disposal of waste generated as a result of elective hazardous materials use. Asbestos Contractor will provide waste designation and disposal documentation sufficient to satisfy Owner and Owner's Representative that waste was sufficiently characterized and properly disposed. Asbestos Contractor will assume all costs necessary to sufficiently document waste characterization and disposal

b, Countertop Material (Black Ebonite-type) Asbestos containing countertop material is located within the 200 Wing classrooms. The ACM counter top material specified for abatement are black in color consistent with ebonite-type material. Counter top units range in size from 8 to 25 square feet in size and include rectangular and octagon shaped units.

A countertop unit is defined as the counter top system located within a designated area. The counter tops may be a single installed component, or multiple components assembled to create the system.

Contractor shall remove all science countertops as asbestos containing waste.

c. Cement Asbestos Board: Asbestos containing cement board is located within the science fume hood in the 200 Wing.

Contractor shall remove all fume hood cement board as asbestos containing waste.

d. Chalkboards: Chalkboards are presently located behind white boards in the classrooms of the 200 and 300 Wing. Chalkboards were inaccessible during the initial inspection. As such, all chalkboards and associated adhesives are assumed to be asbestos containing until further sampling can be conducted to determine true ACM content.

Contractor shall remove all chalkboards, chalkboard adhesive, and residual adhesive on wall materials, as asbestos containing waste.

e. Built-up Roofing: Built-up type ACM roofing materials are present underlying a vinyl membrane system.

Identified ACM roofing materials associated with the Breezeway to the 100 Building was limited to a silver paint layer located directly under the membrane. Contractor shall remove membrane and silver paint layers as asbestos containing debris.

The black asphaltic built-up roofing underlying the membrane on the flat roof the of the 200 and 300 Wings was identified to be ACM. Contractor shall remove all built-up roofing material down to the underlying wood deck as asbestos containing waste.

Silver paint on the built-up roofing associated with the Cafetorium barrels was identified to be asbestos containing. The flat roof located between the Gymnasium and Cafetorium barrels was determined to be non-ACM. Contractor shall remove membrane and silver paint layers on the Cafetorium barrels as asbestos containing debris.

1.4 ASBESTOS SPECIFIC SUBMITTALS

A. Pre-work Submittals: The following items shall be submitted and approved in writing by the Owner's Representative at least 10 working days prior to commencing work involving asbestos materials.

1. Certifications: Submit documentation of a valid Asbestos Contractor License, worker certifications and supervisor certification for the State of Washington.

2. Insurance: A Certificate of Insurance shall be provided naming the Wapato School District as primary and noncontributory additional insured on the Asbestos Contractor's insurance policy. In addition to insurance requirements specified in the General Conditions, the Asbestos Contractor shall submit and maintain coverage types and amounts in companies acceptable to the Owner of not less than $1,000,000 per occurrence Asbestos Specific Liability Insurance.

3. Permits and Notifications: Submit copies of all permits and notifications that are secured in conjunction with asbestos removal and encapsulation, hauling, and disposition. Provide timely notification of such actions as may be required by federal, state, regional, and local authorities.

4. Asbestos Plan: Submit a detailed site-specific plan of the work schedule and procedures to be used in the removal of materials containing asbestos. The Owner's Representative, prior to the start of any asbestos work, shall approve the asbestos plan. Such plan shall include the following:

   a. Site-specific health and safety summary.
   b. Location and layout of asbestos removal areas.
   c. Location of decontamination enclosures and negative air filtration units.
   d. Number and location of additional negative air filtration units.
   e. Sequencing of asbestos related work.
   f. Type, approximate number, and manufacturer data on glove bags to be used during abatement.
   g. Disposal plan that includes the name and address of asbestos landfill; estimated waste quantity to be removed from work site; and procedures for hauling and disposal that comply with 40 CFR 61 Subpart M (NESHAP), 49 CFR Subchapter C (HMTA), and state, regional and local standards.
   h. Type of wetting agent and asbestos sealants to be used.
   i. Material Safety Data Sheets (MSDS) for products stored or used onsite.
   j. Proposed analytical laboratory and proof of asbestos accreditation.
   k. Documentation that a respirator program has been established as required by ANSI Z88.2, 29 CFR 1910.134, WAC 296-842.

l. Description of procedures to be used should asbestos become spilled during storage or transport.

B. Work-In-Progress Submittals: The Asbestos Contractor shall have the following documentation onsite and available for review by Owner's Representative during the project. Work-in-progress submittals shall also be included with post-work submittals.

C. Daily Logs: For each shift the Asbestos Contractor is onsite, a daily work log (Supervisor's report) shall be completed. Each log shall document at least the following information:

1. Workers' name, certification number and expiration date.
2. Worker/visitor entry/exit log to isolated work zones.
3. Labor hours and details of job tasks for each worker.
4. Respiratory protection used by each worker.
5. Number and type of air samples collected.
6. Number of bags or quantity of ACM removed from each work area.
7. Amount of surfactant or encapsulant used.
8. Negative air machine readings.
9. Containment area barrier smoke-test results.
10. Problems or delays.
11. Project progress.

D. Air Monitoring Records: All DOSH compliance personal and area air monitoring shall be available for the Owner's Representative's review daily. Analytical results of samples collected by the Asbestos Contractor are required to be submitted for review by the Owner's Representative within 48 hours of sampling period completion.

E. Disposal Documentation: Disposal receipts (waste shipment records) shall be kept onsite for Owner's Representative review and submitted with project closeout documentation at the conclusion of each mobilization. As stated above, waste generation quantities shall be recorded in the Asbestos Contractor's daily logs and correlate with disposal receipts.

F. Notification Revisions: Notification of change in work dates, hours, practices, and quantities removed shall be submitted to the appropriate agencies and the Owner's Representative.

G. Post-work Submittals: Asbestos Contractor shall submit post-work project documentation to Owner's Representative within 10 days of substantial completion of each mobilization of asbestos abatement. Post-work submittals must be received and approved by Owner's Representative prior to project payment. Post-work documentation shall include at least the following:

1. All permits and notifications.
2. All waste shipment records (signed by final disposal facility).
3. Daily work logs (Supervisor's report).
4. All air monitoring analytical results.
5. All worker certification documentation.
6. Documentation of all hazardous waste characterization, transportation and disposal.

1.5 JOB CONDITIONS

A. Integration of Schedules: The Asbestos Contractor and General Contractor shall work closely together to integrate and schedule asbestos abatement activities with other site activities. Asbestos Contractor shall complete abatement work, inclusive of time allowance for clearance sampling and analytical receipt in accordance with General Contractors work requirements. Asbestos Contractor shall anticipate that General Contractor may require multiple work phases or additional work shifts

within a work day in order to meet construction deadlines.

B. Adjacent Student and Staff Areas: During performance of the ACM work, other contractors, District staff, public and other professionals will occupy adjacent campus buildings. Contractor shall be responsible for collected perimeter air samples for analysis by PCM. Perimeter PCM analytical results shall remain at or below the pre-abatement levels. If perimeter thresholds are exceeded the Asbestos Contractor shall stop work and initiate corrective action. Asbestos Contractor shall not be permitted to resume work until perimeter air monitoring documents fiber concentration at or below pre-abatement levels.

C. Coordination: Asbestos Contractor shall be responsible for coordinating notification, scheduling, mobilization, and remobilization of asbestos abatement work. Asbestos Contractor shall be responsible for remobilization and abatement costs for asbestos uncovered during demolition that were specified for removal under this section but not abated prior to demolition. Asbestos Contractor coordination and scheduling shall allow for air clearance sample collection and receipt of corresponding analytical results as specified below for substantial completion.

D. Utility Services: Asbestos Contractor shall coordinate all power and water requirements with the General Contractor. As a portion of the base bid the Asbestos Contractor shall coordinate access to and may be required to supply supplemental power and water during the work.

E. Notification of Mobilization or Remobilization: Owner's Representative shall be notified in writing 10 working days prior to Asbestos Contractor's mobilization or remobilization to the site.

F. Substantial Completion: Substantial completion for the asbestos abatement portion of this project is defined as the time when final clearance results are received from the analytical laboratory for each work area, and results of these samples are in complete compliance with the contract documents, and federal, state, and local regulation, whichever is most stringent, for clearance air samples.

G. Clearance Events: All work specified herein shall be subject to a clearance event completed by the Owner's Representative. Prior to a work area being ready for a clearance event, the Asbestos Contractor will have completed work, passed visual inspection and provided a field technician access to work area for clearance sampling a minimum of 48 hours prior to substantial completion date identified in this section. If for any reason the work area is found to not be ready for a clearance event or the clearance event is determined to have failed, Asbestos Contractor shall be subject to accrued fees.

1. Air clearance by phase contrast microscopy (PCM): Clearance samples shall be analyzed PCM in areas where non-friable ACM are manually removed.

    a. The clearance event shall be considered complete if fiber concentrations do not exceed the higher of 0.01 fibers per cubic centimeter (f/cc) or the pre-abatement concentration, provided that the pre-abatement concentrations do not exceed the DOSH personal exposure limit of 0.1 f/cc.

2. Air clearance by transmission electron microscopy (TEM): Clearance samples shall be analyzed by TEM in areas where friable ACM are removed, or where non-friable by non-manual or mechanical methods, or excessive loading of non-asbestos fibers, such as fiberglass or cellulose, may obscure or skew PCM analytical results above acceptable levels. These areas include, but are not limited to the tunnel system and area of surfacing and overspray.

    a. The TEM clearance event shall be considered complete if fiber concentrations do not exceed the 70 structures per square millimeter (s/mm^2) for the average of not less than five samples collected within the work area.

3. Visual clearance for exterior abatement: Asbestos Contractor will have completed work, and provided access to a field technician for clearance by visual inspection. A passed visual inspection will represent substantial completion of exterior asbestos abatement.

H. Number of Clearance Events: Owner shall be responsible for providing two (2) TEM clearance events, eight (8) PCM clearance events, and four (4) visual clearance events. An air clearance event is defined as the act of collecting air samples following work area cleaning, visual inspection, and work area encapsulation. If analytical results from a clearance event are unacceptable as described below, subsequent re-sampling of a work area shall be accrued as an additional clearance event. The Asbestos Contractor shall be responsible for the cost of sample collection, shipping, and analysis for each additional clearance event in excess of the quantity stated above. The cost of each additional TEM clearance event **$1,600** and the cost of each additional PCM clearance event is **$700.** If the number of work areas requiring clearance is extended in accordance with the General Conditions, costs will not be assessed until after the extended number has been reached.

I. Unacceptable Clearance Results: Unacceptable clearance results, include but are not limited to, presence of remaining ACM, ACM debris, dust or other indications of incomplete cleaning, encaspulant that has not dried, overloading of cassettes whether with fibrous or non-fibrous materials, laboratory results at concentrations in excess of those allowed, etc.

J. Final Asbestos Abatement Completion: Final completion for the ACM abatement portion of this project is defined as the time when all post-work submittals, including waste shipment records signed by the disposal facility, are reviewed and approved by the Owner's Representative.

1.6 QUALITY CONTROL

A. General Air Monitoring: Asbestos Contractor is responsible for performing all monitoring of airborne concentrations of asbestos fibers, both personal and environmental, as required by 29 CFR 1910, 1926, WAC 296-62 and as specified herein. Owner's Representative is responsible for performing additional pre and post-abatement sampling. Samples collected by Owner's Representative neither substitute for nor negate Contractor's responsibility for collecting similar samples for compliance purposes.

1. An accredited laboratory shall analyze all samples taken by the Asbestos Contractor. Analytical results shall be made available to the Owner's Representative within 24 hours of sample completion.
2. Employee Monitoring: Asbestos Contractor bears sole and full responsibility for employee compliance air monitoring as required in 29 CFR 1926.1101 and WAC 296-62-07709.
3. Asbestos Contractor shall bear all analytical costs for samples obtained by the Asbestos Contractor.

B. Monitoring Prior to Asbestos Abatement Work: Owner will make available pre-abatement PCM air monitoring results to Asbestos Contractor prior to onset of asbestos abatement work. In addition, prior to the start of work the Contractor shall collect a minimum of one PCM air sample per 2,000 SF of NPE work area, or a minimum of two air samples per work area, and an appropriate number of background air samples immediately adjacent to the work area. Minimum sample volume shall be 1,200 liters. Contractor shall make available baseline (background) PCM air monitoring results to the Owner's Representative at least one day prior to the onset of asbestos abatement work.

C. Monitoring During Asbestos Abatement: Asbestos Contractor shall collect area, personal, and environmental air samples during abatement to satisfy regulatory requirements. Air samples shall be collected at a frequency consistent with the Asbestos Contractor Monitoring Schedule and shall be

within control limits. Additional engineering controls and personal protective measures shall be required if control limits are exceeded.

D. Work Practices as a Function of Airborne Fiber Concentrations: With prudent and proper work methods, it is not anticipated that airborne fiber concentrations will rise significantly above background concentrations during specific abatement techniques including non-aggressive intact removal of substantially intact materials. By design, use of appropriate work methods should prevent fibers from being released to ambient air during these abatement activities.

At any time, should air samples reach or exceed airborne fiber concentrations specified below, abatement work must stop, change respirators (if necessary) and initiate cleaning. Construction of additional NPE and three-stage decontamination facility shall occur following cleaning as approved by the Owner's Representative. Removal or repair procedures shall not be resumed until the fiber count is reduced below the airborne fiber concentration specified below, and the Owner's Representative authorizes resumption of the abatement work.

Following is the Asbestos Contractor's required sample collection frequency for each work area and associated fiber concentration control limits.

Table 2: Asbestos Contractor Monitoring Schedule and Airborne Fiber Concentrations

Area/Person to be Sampled	Samples per 8 hour shift	Minimum Sample Volume	Control Limit Concentration fibers/cubic centimeter (f/cc)
"Most Contaminated Worker" Peak	1	30 liters	0.5 x Respirator Protection Factor (RPF)
"Most Contaminated Worker"	2	240 liters	0.5 x RPF
Inside Work Area	1	960 liters	0.5 x RPF
Outside Work Area, Perimeter Adjacent Control Area	1	1200 liters	0.01 or Pre-abatement, whichever is higher
Non-aggressive Intact Worker	1	560 liters	0.015 or 0.005 above Pre-abatement, whichever is higher
HEPA Exhaust	1	1200 liters	0.01 or Pre-abatement, whichever is higher

E. Air Monitoring After Final Cleanup Up: A minimum of five air samples per enclosed work area will be taken by the Owner's Representative following initial and final cleanup. **Final air samples in enclosed work areas shall be taken under aggressive conditions.** Aggressive air sampling conditions consist of directing exhaust air from a portable air leaf blower at all work surfaces at a rate of 5 minutes/2,000 SF of enclosed space and placing fans on low speed to remain in operation throughout test.

1. PCM: Where PCM analysis is used, analytical results from final air tests must be less than 0.01 f/cc or the pre-abatement level, whichever is greater, as determined by NIOSH Method 7400, Phase Contrast Microscopy. If for any reason fiber concentrations of final air tests are indeterminate, including excessive particulate loading, analytical results shall be rejected and shall be considered the same as if fiber concentrations exceeded the clearance standard.

2. TEM: Where TEM analysis is used, analytical results from final air tests must be less than 70 s/mm^2 for the average results of not less than five samples collected in accordance with AHERA criteria and evaluated under AHERA clearance criteria. If for any reason fiber concentrations of final air tests are indeterminate, including excessive particulate loading,

analytical results shall be rejected and shall be considered the same as if fiber concentrations exceeded the clearance standard.

1.7 APPLICABLE CODES, REGULATIONS, AND PUBLICATIONS

A. Applicable Regulations: All applicable codes, regulations, and standards have the same force and effect, and are made a part of the contract documents as if copied directly into the contract documents, or as if published copies are bound herewith. Asbestos Contractor is responsible and liable for full compliance with all applicable federal, state and local asbestos regulations.

B. Safety Compliance: In addition to detailed requirements of this specification, comply with laws, ordinances, rules and regulations of storing, transporting, and disposing of asbestos waste materials. Asbestos Contractor shall comply with 40 CFR Part 61. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the work. Where the requirements of this specification and referenced documents vary, the most stringent shall apply.

PART 2 – PRODUCTS

2.1 EQUIPMENT

A. The Asbestos Contractor shall use equipment listed below. Deviations from any equipment listed herein shall be submitted to the Owner's Representative for approval. All such submittals must be accompanied by U.S. Department of Labor approval. Asbestos Contractor shall allow Owner's Representative to inspect any materials and equipment used during the project for suitability and/or condition.

1. Respirators: Minimal respiratory protection during asbestos removal activities shall be negative pressure, half face respirator equipped with HEPA filtration cartridges. Select respirators from those approved by the Mine Safety and Health Administration (MSHA) or by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 42 CFR part 85.

2. Protective Clothing: Asbestos Contractor shall supply protective clothing for all personnel and authorized visitors. Protective clothing shall be fire retardant disposable protective whole body clothing, head coverings, gloves, and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Protective clothing shall be disposed of as contaminated waste at the end of each workday.

3. Eye Protection: Provide goggles to personnel engaged in asbestos operations when the use of a full-face respirator is not required.

4. Danger Signs and Labels: Provide danger signs, warning labels, and labeled barricades in accordance with WAC 296-62, WAC 296-24 and 29 CFR 1910.

5. Plastic Sheeting: Plastic sheeting shall be two layers of 6 mil. (0.15 mm) thickness on walls, barriers, ceilings, and floors and as necessary to prevent damage to underlying materials during course of work. Where required by code, fire retardant plastic sheeting shall be used. Plastic shall extend a minimum of 12 inches beyond the adjacent surface interface. Asbestos Contractor shall immediately repair any tears or punctures in sheeting to prevent ACM or water from contaminating underlying materials.

6. Tape: Shall be capable of sealing joints of adjacent sheets of plastic and for attachment of plastic sheeting to finished or unfinished surfaces of dissimilar materials. Tape shall be capable of adhering under both dry and wet conditions, including use of amended water.

7. Surfactant (Wetting Agent): Surfactant shall be Guardian Wetting Agent, ASBESTO-WET, NANCOL or equivalent approved by the Owner's Representative consisting of 50 percent polyoxyethylene ether and 50 percent of polyoxyethylene or polyglycol ester and shall be mixed with water in accordance with manufacturer's directions.

8. Impermeable Containers: Impermeable Containers shall be both air and watertight. Containers shall be double layered 6 mil. plastic bags, each layer capable of being independently sealed. Alternate impermeable container systems must have two separate air and water tight sealing mechanisms and be approved by the Owner's Representative prior to their use. Containers shall be labeled in accordance with OSHA Regulation 29 CFR 1926.1101, 40 CFR part 61, 49 CFR subchapter C, and WAC 296-62-5411. Containers shall be transported to disposal site in an enclosed vehicle fully sealed with 6 mil. polyethylene sheeting.

9. Pressure Differential Equipment: Pressure differential equipment shall be utilized continuously from first disturbance of ACM until completion of successful final inspection and acceptable analytical results from air clearance samples. Pressure differential equipment shall be high efficiency particulate air (HEPA) filtration systems equipped in compliance with ANSI 29.2-1979 (local exhaust ventilation) and EOA guidance document EPA 560/5-83-002 *Guidance for Controlling Friable Asbestos-Containing Materials in Buildings* Appendix F: Recommended. No air movement system or air filtering equipment shall discharge unfiltered air outside work areas. Exchange rates in all areas of local HEPA exhaust and all NPE (including Mini-NPE) shall be maintained at no less than 4 air changes per hour as calculated by Asbestos Contractor and approved by Owner's Representative.

   Asbestos Contractor is responsible for continuous monitoring and recording of pressure differential, through the use of a real time datalogging monitor or continuous strip chart readout, across NPE barriers using a pressure differential monitoring device(s). A minimum of -0.02 column inches of water pressure differential shall be maintained within the NPE.

10. Sealable Plastic Bags: Shall be 6 mil. minimum thickness for transportation and disposal of asbestos contaminated material.

11. Other Contaminated Materials: Such materials removed intact will be securely wrapped and taped in at least two layers of 6 mil. polyethylene and labeled.

12. Special Materials: Use materials such as plywood, cardboard, polyethelyene sheeting, etc., as necessary to protect non-movable objects in the work area from unnecessary damage resulting from abatement activity.

PART 3 – EXECUTION

3.1 INSPECTION

A. Site Inspection: While performing asbestos related work, the Asbestos Contractor shall be subject to onsite inspection by the Owner's Representative who may be assisted by safety or health personnel. If work is found to be in violation of this specification, as determined by the Owner's Representative, a stop work order shall be in effect immediately and remain in effect until the violation is resolved. Standby time and any additional monitoring and laboratory analyses required to resolve and document violation resolution shall be at the Asbestos Contractor's expense.

B. Negative Pressure Enclosure: All NPE (including mini-NPE) shall be inspected and smoke tested daily by the Asbestos Contractor. Visual inspections by Owner's Representative will be at the

Owner's Representative's sole discretion. Asbestos Contractor is required to notify the Owner's Representative a minimum of 24 hours prior to an initial NPE visual inspection. Removal work in a NPE shall not commence until Owner's Representative inspects and accepts initial NPE construction or accepts documentation of Asbestos Contractor's inspection.

C. NPE Construction Requirements: Satisfactory completion of the following standard procedures and checks shall constitute acceptable NPE construction and inspection documentation.

1. Negative air machines are sized and placed strategically to ensure airflow is strong and consistent throughout the enclosure, as evidenced by work area schematic drawings.

2. A minimum of four air exchanges per hour will be maintained in the NPE, as calculated by the Asbestos Contractor and accepted by the Owner's Representative. Note: Negative air machines with 2,000 cubic feet per minute (cfm) capacity shall be conservatively calculated to have a 1,500 cfm capacity (25% less capacity). If negative air machines of alternate capacity are used, their rating shall be conservatively calculated at 75% of manufacturer's rated capacity.

3. Visual inspection and smoke tests shall indicate that critical barriers, openings, and surfaces are sealed properly and that no enclosure breaches have occurred.

4. A minimum of -0.02 column inches of water pressure differential shall be maintained within the NPE as evidenced by a real time manometric measurement (a datalogging monitor or continuous strip chart readout) for each NPE or mini-NPE must be available for inspection and submitted as part of post-work documentation).

5. Smoke testing all corners and pockets of the enclosure document strong and consistent airflow towards HEPA filtration or collection device.

6. Record the person's name and negative air machine hours each time a pre-filter or HEPA filter is replaced.

D. Clearance Inspection: If the Owner's Representative is requested by the Asbestos Contractor to perform a cleanup or clearance inspection and arrives to find the work area not ready for inspection, the Asbestos Contractor will be responsible for any additional expenses incurred by the Owner's Representative. This will include any additional travel time, onsite time and expenses resulting from inspection delay.

E. Transmission Electron Microscopy for Contract Disputes: If TEM is used to determine fiber types in order to resolve a dispute or receive final clearance, then the cost of such analysis will be borne by the party requesting use of TEM analysis.

3.2 PREPARATION OF WORK AREAS

A. Previously Provided Information: All requirements specified previously in this section or in other parts of the project specifications shall apply to the preparation of work areas.

B. Work Area Preparations: The following shall apply to all work areas.

1. Regulated Areas: Establish regulated areas in accordance with WAC 296-62-07711. At a minimum, seal off all critical barriers, openings, and all floors with two layers of 6 mil. thickness polyethylene sheeting before commencing abatement work. Sheeting shall extend a minimum of 12 inches beyond adjacent surface interfaces and seam overlaps. Polyethylene

sheeting layers shall be independently sealed. All seams will be sealed with tape to prevent leakage through floor and wall barriers.

2. Water Damage: Contractor shall be responsible for any water damage to underlying areas as a result of water penetration through the polyethylene sheeting. Contractor shall cause to be completed all repair necessary to restore damage caused by water leakage and shall bare any costs and time burdens therein.

3. Airlocks: Build airlocks at entrances to and exits from work areas.

4. Fire Exits: Maintain emergency and fire exits from the work areas, or establish alternative exits.

5. Respiratory Protection: Respirator protection shall be in accordance with WAC 296-62-07715.

6. Clean and Remove Objects: Wipe clean with cloths and amended water or HEPA filtered vacuum all objects to be removed from the work area. Owner's Representative will designate storage areas. The Asbestos Contractor is responsible for transportation of objects from the work area to designated storage areas or disposal.

7. Engineering Control Practices: Institute engineering control work practices in accordance with WAC 296-62-07712.

3.3 ASBESTOS REMOVAL

A. Removal Work: Perform all removal work in accordance with WAC 296-62-077. All ACM shall be containerized and secured at the end of each workday.

B. Friable ACMs: For all friable ACMs, WAC 296-62-07751, *Appendix I - Work Practices and Engineering Controls for Class I Asbestos Operations*, shall be mandatory. No debris, unsecured equipment, tools, etc. shall remain onsite past the end of each workday.

C. Non-Friable ACMs: Non-friable ACM shall be abated intact, non-aggressively and shall be conducted in a manner consistent with Class II operations as described by Washington Labor and Industry and Occupational Safety and Health (OSHA) regulation. **All VT removal shall occur within an NPE. All employees shall be CAS or CAW.**

3.4 AIRBORNE FIBER CONCENTRATIONS

Fiber concentrations, as described in the "Asbestos Contractor Monitoring Schedule and Airborne Fiber Concentration" table, shall not be exceeded during the work. See the table on Page 7 of this section. If airborne fiber concentrations are exceeded, Asbestos Contractor must stop work and commence area cleaning.

3.5 WASTE REMOVAL FROM THE WORK AREA

Gross asbestos debris shall be bagged by the end of each workday. ACM removed from work areas shall be sealed in clean impermeable disposal bags of 6 mil. thickness immediately upon removal. External surfaces of bags shall be thoroughly cleaned in designated work area by wet sponging. Move bags into wash area, wet clean each bag thoroughly, place and seal in a second clean impermeable 6 mil. bag, place bags in labeled containers for transport. Move containers to holding area pending removal to uncontaminated areas and transportation to landfill. Ensure that containers are removed from the holding area by workers dressed in clean coveralls who have entered from the equipment/waste load-out decontamination station or adjacent clean area. Ensure that workers do not

enter from contaminated areas into the clean room during any phase of project performance. All personnel handling ACM shall wear protective clothing and respiratory protection.

3.6 CLEANUP OF WORK AREAS

A. After completion of gross removal work, remove visible accumulations of asbestos material and debris. Surfaces from which asbestos has been removed shall be wire brushed, and/or wet sponged, or cleaned by an equivalent method to remove all visible material. During this work, the surfaces being cleaned shall be kept wet. During cleaning operations, critical barriers, such as windows, doors, and HVAC vents and protective barriers shall remain sealed, and any HEPA filtration negative air pressure systems, air filtration and decontamination enclosure systems shall remain in service.

B. Clean all other surfaces in the work area and any other contaminated areas with water and/or with HEPA vacuum equipment. After cleaning the work area, allow surfaces to dry completely (6-hrs. minimum). After a drying period, again wet clean or clean with HEPA vacuum equipment all surfaces in the work area. After completion of the second cleaning operation, the Owner's Representative will perform a complete visual inspection of the work area to ensure that the work area is dust free.

C. If the area is free of dust, the Owner's Representative may collect discretionary air samples to verify that the work area is substantially free of airborne fiber. Sealed containers and all equipment used in the work area shall be included in the cleanup and shall be removed from work areas, via the decontamination enclosure system, at an appropriate time in the cleaning sequence.

D. When the inspection and discretionary sampling indicates that the removal and cleanup performance is satisfactory and complete as determined by the Owner's Representative, all exposed surfaces shall be sealed with an approved encapsulant. Manufacturer's encapsulation instructions shall be strictly observed. The Owner's Representative must approve deviation from Manufacturer's instructions.

E. Following a period of time sufficient to allow the encapsulant to dry completely (8-hrs. minimum), remove plastic sheeting covering walls and floors and dispose of as contaminated materials. Critical barriers including plastic sheets covering doors, vents, windows, air plenum grills, and the decontamination system barriers will be left in place during final air testing. Surfaces exposed by the removal of plastic sheeting on walls and floors will be thoroughly cleaned. If underlying surface cleaning or project performance is not satisfactory as determined by the Owner's Representative, reclean all surfaces.

F. The Owner's Representative shall conduct final inspections on each work area. When final inspection and air testing determines that the area is free of visible accumulations of dust and ambient air is within control limits for "clean air," the decontamination enclosure systems shall be removed; the area thoroughly wet cleaned; and materials from the equipment and shower rooms disposed of as contaminated waste. A final check shall be carried out to ensure that no dust or debris remains on surfaces as a result of dismantling operations. Objects that were removed prior to abatement shall be relocated to the clean work area.

3.7 WASTE DISPOSAL

A. Transport of Asbestos Containing Materials and Asbestos Containing Waste: Transport sealed and labeled containers in a vehicle compartment completely enclosed with two layers of 6 mil. polyethylene sheeting. Transport waste for disposal to the authorized site regularly, so that available onsite storage capacity is not exceeded. Frequency of transportation shall be at a minimum once a week. Procedures for transport and disposal shall comply with 40 CFR 61 Subpart M (NESHAP); 49 CFR Subchapter C (HMTA); and state, regional, and local standards and regulations.

3.8 LANDFILL CRITERIA

Dispose of undamaged and sealed containers only at the approved disposal site. If containers become broken or damaged during transportation, the damaged containers must be placed in a sealed drum and the entire contaminated drum must be buried. All ACM waste shall be disposed at a facility permitted under 40 CFR Subchapter I to accept asbestos waste.

3.9 DISPOSAL DOCUMENTATION

Submit Waste Shipment Record (WSR) documentation including name and address of landfill, name of landfill employee authorized to accept asbestos waste, quantity of waste removed from work site, and quantity of waste disposed of at the landfill.

3.10 HAZARDOUS WASTE

If hazardous waste is generated, all documentation of waste characterization, transport and disposal shall be submitted to the Owner's Representative.

PART 4 – STANDARD TERMS

1.1 GLOSSARY

Air Monitoring: Process of measuring the asbestos fiber content of a specified volume of air in a stated period of time.

Asbestos Contractor: Contractor performing the asbestos abatement portion of this project.

Asbestos Containing Waste Material: Asbestos containing material or asbestos contaminated objects requiring disposal.

Authorized Visitor: Owner or his designated representatives or regulatory or other agency representatives having jurisdiction over the project.

Clearance: Point in time at which visual inspections and airborne fiber concentrations in the work area document that completion of abatement.

Control Limit: Refers to a maximum airborne fiber concentration. Additional engineering controls and personal protective measures shall be required if maximum fiber concentration is exceeded.

Critical Barrier: An air and water-tight covering constructed of two layers of 6-mil polyethylene plastic and tape that is placed over all penetrations of the floor, walls, and ceiling to prevent airborne asbestos from escaping into areas outside the work area or from lodging in cracks around the penetrations.

Decontamination Enclosure System: An enclosed area adjacent and connected to the regulated area. For a NPE the decontamination enclosure system consists of 3 stages: an equipment room, shower room, and clean room. For a mini-NPE the decontamination enclosure system consists of 2 stages: an equipment room, and clean room. A system is formed by connecting a series of rooms with curtained doorways. Each doorway forms airlocks between any two adjacent rooms. The system is used to remove asbestos contamination from workers, materials, and equipment.

Encapsulant: Liquid material which can be applied to ACM which controls the possible release of asbestos fibers either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant).

Environmental Monitoring: Completion of visual observations and environmental samples related to the project QA/QC and performance of the Contractor.

Facility Component: Any pipe, duct, boiler, tank, reactor, turbine, furnace, etc. at or in a facility or any structural member of a facility.

Fixed Object: Piece of equipment or furniture in the work area that cannot be removed from the area.

Friable Asbestos Material: Substance containing more than one percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

HEPA Equipment: A tool used during asbestos removal whose exhaust is filtered by means of a high efficiency particulate air filter. HEPA equipment shall be equipped with HEPA filters capable of removing 99.97% of all particulate to 0.3 microns in diameter.

Industry Standards: Applicable standards of construction industry that have the same force and effect on performance of the work as if copied directly into contract documents or bound and published therewith. Standards referenced in contract documents or in governing regulations have precedence over non-referenced standards, insofar as different standards may contain overlapping or conflicting requirements. Comply with standards, wherever more stringent, in effect as of date of contract documents, unless otherwise indicated.

Local HEPA Exhaust: Ventilating the regulated area so that contaminated air is moved away from work and toward a filtration or collection device equipped with a HEPA filter. Air that has passed through the HEPA filter is then exhausted outdoors.

Mini-Negative Pressure Enclosure (Mini-NPE): Abatement method that establishes an NPE zone as a subarea of the total area. Refer to Negative Pressure Enclosure definition for additional design and monitoring requirements. Decontamination facilities typically consist of a two air chamber airlock. Work practices consist of double suiting, wet removal, and HEPA vacuuming.

Movable Object: Piece of equipment or furniture in the work area that can be removed from the area.

Negative Pressure Enclosure (NPE): A method of confining a regulated area within impermeable barriers of polyethylene. A NPE can be of any configuration and shall, relative to outside areas, maintain a pressure differential of -0.02 column inches of water. A NPE shall be designed so that air inside the area can only exit through a HEPA filtered exhaust system. The HEPA system shall be capable of maintaining at least 4 air changes per hour and shall be capable of directing a constant low velocity air flow toward the HEPA filtration or a collection device. Typically, the NPE includes a three-stage decontamination system, wet removal, single suiting, and HEPA vacuuming.

Non-aggressive Removal: Taking out or stripping of wetted asbestos containing materials by methods such as spud bars, pry bars, shovels, knives, hatchets, etc.

Non-Friable Asbestos Material: Substance containing >1% asbestos in which the fibers have been locked in by a bonding agent, coating, binder, or other material so that the asbestos is well bound and will not release fibers in excess of the asbestos control limit during appropriate use, handling, demolition, storage, transportation, processing, or disposal.

Owner's Representative: Person(s) designated by the Owner, to act in their behalf.

Personal Monitoring: Sampling asbestos fiber concentrations within the employees breathing zone.

Phase Contrast Microscopy (PCM): Method used to analyze air samples for the presence of fibers.

Prior Experience: Experience required of the Asbestos Contractor on asbestos projects of similar nature and scope to ensure capability of performing the asbestos abatement in a satisfactory manner. Similarities shall be in areas related to material composition, project size, abatement methods required, number of employees and the engineering, work practice and personal protection controls demonstrated by that experience.

Shower Room: Area between the clean room and the equipment room in the worker decontamination enclosure system, with hot and cold or warm running water and suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas.

Surfactant: Chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

Testing Laboratory: Independent entity engaged by the Owner, Owner's Representative or Asbestos Contractor to perform analysis of air samples and bulk samples. The laboratory shall be accredited by the Laboratory Accreditation Program of the American Industrial Hygiene Association (AIHA). The lab will be rated as "Proficient" in the AIHA PAT Program or in the EPA asbestos in bulk materials Quality Assurance (QA) Program for asbestos identification in bulk materials.

Transmission Electron Microscopy: Method to analyze air or bulk samples for presence of asbestos.

Visible Emissions: Any emissions containing particulate materials that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

Wet Cleaning: Process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with amended water, and by afterwards disposing of these cleaning tools as asbestos contaminated waste. Use of HEPA filtered vacuums are recommended during wet cleaning.

Work Area: Designated rooms, spaces, or areas of the project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions. A contained or isolated work area is a work area that has been sealed, plasticized, and equipped with a decontamination enclosure system. A non-contained work area is a controlled access work area that has not been plasticized nor equipped with a decontamination enclosure system.

END OF SECTION 028080

SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Removing existing vegetation.
2. Clearing and grubbing.
3. Stripping and stockpiling topsoil.
4. Removing above- and below-grade site improvements.
5. Disconnecting, capping or sealing, and abandoning site utilities in place.
6. Temporary erosion- and sedimentation-control measures.

B. Related Sections:
1. Division 01 Section "Temporary Facilities and Controls" for temporary utility services, construction and support facilities, security and protection facilities, and temporary erosion- and sedimentation-control measures.
2. Division 01 Section "Execution" for field engineering and surveying.

1.3 DEFINITIONS

A. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown; reasonably free of subsoil, lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.

D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

A. Existing Conditions: Documentation of adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
1. Use sufficiently detailed photographs.

B. Record Drawings: Identifying and accurately showing locations of encountered utilities, capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

A. Preinstallation Conference: Conduct conference at Project site.

1.7 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, walks, and other adjacent occupied or used facilities during site-clearing operations.
   1. Do not close or obstruct streets, parking lots, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
   2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by contractor.
   1. Do not proceed with work on adjoining property until permission and/or permits are acquired.

C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.

D. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing. Maintain utility locates throughout the project work period.

E. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

F. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Division 31 Section "Earth Moving."
   1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Protect existing site improvements to remain from damage during construction.
   1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.

B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.

D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 EXISTING UTILITIES

A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing, when requested by Contractor.

1. Verify that utilities have been disconnected and capped before proceeding with site clearing.

B. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
1. Arrange with utility companies to shut off indicated utilities.
2. Owner will arrange to shut off indicated utilities when requested by Contractor.
3. Verify that utilities have been disconnected and capped before proceeding with site clearing.

C. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify the Owner and Architect not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Owner's written permission.

D. Removal of underground utilities is included in earthwork sections and with applicable plumbing, HVAC, electrical and utilities sections and Section 024116 "Structure Demolition".

E. Excavate for and remove underground utilities indicated to be removed.

3.4 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
2. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.
3. Use only hand methods for grubbing within protection zones.
4. Chip removed tree branches and dispose of off-site.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

3.5 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil as recommended in the geotechnical report prevent intermingling with underlying subsoil or other waste materials.

1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 1.5 inches in diameter; trash, debris, weeds, roots, and other waste materials.
2. Salvage all available topsoil onsite to the greatest extents possible for reuse.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
1. Limit height of topsoil stockpiles to 72 inches.
2. Do not stockpile topsoil within protection zones.
3. Dispose of surplus topsoil onsite. Surplus topsoil is that which exceeds quantity to be reused.

3.6 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

B. Remove slabs, paving, curb, and aggregate base as indicated.
1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property. Keep all trash & debris off of City Right of Ways.

B. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 311000

CITIZEN HOTLINE

The Washington State Auditor's Office operates a hotline for citizens and government employees to report assertions of government fraud, waste and abuse. It is also a place to report government efficiency or outstanding achievement.

- This is an anonymous service. You are not required to provide your name and/or contact information. However, you may choose to provide it to help our office with follow-up on referrals. The law requires that your confidentiality be maintained until the report is issued, at which time all records are subject to public record laws. If you wish to waive your confidentiality, please submit this form.
- Please provide as much detail as possible.
- If you are an employee of Washington state government, you may opt to file your complaint with the State Auditor's Whistleblower program, which protects your confidentiality after the investigation and publication of the report.
- If you wish to speak directly to someone about your concern, call our toll-free hotline at 1-866-902-3900.
- Contact us by Mail:

  Washington State Auditor's Office
  ATTN: Hotline
  P.O. Box 40021
  Olympia WA 98504-0031

REFERRAL INFORMATION

What type of entity is involved?

- ○ State
- ○ Local
- ○ Private Company/Individual

Is this report related to the American Recovery and Reinvestment Act (ARRA)?

◉ Yes ○ No

What category of entity is involved?

School Districts

What state or local organization is involved?

What category best fits the assertion you are submitting?

Accounting/Financial Reporting
Apportionment (Enrollment)
Apportionment (Staff Mix)
Apportionment (Transportation)
ASB
Billings/Receivables
Budget Compliance

Please provide a detailed description of the assertion or outstanding achievement, including who, when, where, what, how and how much.

How did this issue come to your attention?

What employee(s), contractors, etc., were involved in the assertion or achievement? Please include employee titles if possible.

Please provide the names of any witnesses to the assertion or achievement, if possible.

Does your assertion relate to a current litigation?

○ Yes ○ No

YOUR INFORMATION(OPTIONAL)

In accordance with RCW 43.09.186 all Hotline submissions are confidential until the completion of the investigation unless the person submitting the concern agrees to waive their confidentiality.

☐ I agree to waive my confidentiality.

Would you like to remain anonymous?

◉ Yes ○ No

First Name:

Last Name:

Street Address:

City:

State: WA

Zip Code:

Home Phone:

Work Phone:

Mobile Phone:

E-mail:

I am a:

○ Local government employee
○ Vendor/contractor
○ Citizen
○ State Employee

May we contact you to obtain additional details, documentation, or clarification?

◉ Yes ○ No

If so, how would you prefer to be contacted (check all that apply):

☐ Home Phone ☐ Work Phone ☐ Mobile Phone ☐ Email ☐ Regular Mail

ADDITIONAL COMMENTS

Please provide any additional details or comments that would help us understand your assertion or achievement.

Submit Referral